

- 2 -

Commissioner for Patents**AMENDMENTS TO THE CLAIMS**

1. (CURRENTLY AMENDED) A method for automatically calculating levels of a given chemical in a liquid from a liquid reservoir using colorimetry testing, comprising the steps of:

(i) collecting in an optical chamber a sample of liquid from a liquid reservoir;

(ii) taking a calibration colorimetry reading of said liquid sample without any reagent, whereby a reference voltage value representative of an acceptable limit of a known chemical is calculated and stored in a memory of a controller unit;

(iii) releasing said liquid sample from said optical chamber;

(iv) collecting in the optical chamber a further sample of liquid from said liquid reservoir;

(v) adding a predetermined quantity of a reagent to said further sample in said chamber, said reagent chosen as having properties making it react to the presence of the known chemical present or to be added to said liquid; and

(vi) taking a test colorimetry reading of said further sample with said reagent added thereto and obtaining a voltage signal representative thereof, whereby a level of said known chemical in said liquid is known with respect to said reference voltage value;

wherein the steps (i) to (vi) are repeated for a subsequent calculation of a level of said known chemical.

2. (ORIGINAL) The method according to claim 1, wherein step (iii) further comprises rinsing said optical chamber so as to prepare same for receiving said further sample.

- 3 -

Commissioner for Patents

3. (ORIGINAL) The method according to claim 1, wherein the liquid reservoir is a swimming pool, the liquid is water and the known chemical is chlorine.

4. (ORIGINAL) A chemical level calculator computer program product comprising code means recorded in a computer readable memory for executing the method defined in claim 1.

5. (CURRENTLY AMENDED) A method for automatically calculating and controlling levels of a given chemical in a liquid from a liquid reservoir using colorimetry testing, said method comprising the steps of:

(i) collecting in an optical chamber a sample of liquid from a liquid reservoir;

(ii) taking a calibration colorimetry reading of said liquid sample without any reagent, whereby a reference voltage value representative of an acceptable limit of a known chemical is calculated and stored in a memory of a controller unit;

(iii) releasing said liquid sample from said optical chamber;

(iv) collecting in the optical chamber a further sample of liquid from said liquid reservoir;

(v) adding a predetermined quantity of a reagent to said further sample in said optical chamber, said reagent chosen as having properties making it react to the presence of the known chemical present or to be added to said liquid;

(vi) taking a test colorimetry reading of said further sample with said reagent added thereto and obtaining a voltage signal representative thereof, whereby a level of said known chemical is known with respect to said reference voltage value; and

(vii) adding a calculated quantity of said known chemical to said liquid reservoir in response to the

- 4 -

Commissioner for Patents

calculated level of said known chemical in said further sample if the calculated level is below said reference voltage value;

wherein the steps (i) to (vii) are repeated for a subsequent calculation of a level of said known chemical.

6. (ORIGINAL) The method according to claim 5, wherein step (vii) includes not adding said known chemical if the calculated level thereof is above said reference voltage value.

7. (ORIGINAL) The method according to claim 6, wherein the steps (i) to (vii) are repeated until the calculated level of said known chemical is above said reference voltage value.

8. (ORIGINAL) The method according to claim 7, wherein step (vii) further includes actuating an alarm if a certain amount of test colorimetry readings are successively below said reference voltage value.

9. (ORIGINAL) The method according to claim 5, wherein step (iii) further comprises rinsing said optical chamber so as to prepare same for receiving said further sample.

10. (ORIGINAL) The method according to claim 5, wherein the liquid reservoir is a swimming pool, the liquid is water and the known chemical is chlorine.

11. (ORIGINAL) A chemical level calculator computer program product comprising code means recorded in a computer readable memory for executing the method defined in claim 5.

12. -20 (CANCELED)